

APPENDIX

SB1 1. A method of multi-enterprise optimization at a buyer computer, comprising:
accessing a forecasted demand for at least one item;
generating one or more proposed flexible trade contracts using the forecasted demand for the item;
communicating each proposed flexible trade contract to a seller computer; and
executing a flexible trade contract created after acceptance of the proposed flexible trade contract at the seller computer.

a1 2. The method of Claim 1, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

3. The method of Claim 2, wherein each forward contract comprises a quantity of the item that a buyer is obligated to purchase and a seller is obligated to supply.

4. The method of Claim 3, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

5. The method of Claim 2, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:
a maximum quantity of the item that a seller is obligated to supply;
a maximum number of item types that the seller is obligated to supply; and
a maximum number of locations where the item must be provided.

6. The method of Claim 5, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

7. The method of Claim 5, wherein each option contract comprises an exercise period after the execution of the option contract during which a buyer must exercise the option.

8. The method of Claim 2, wherein each flexible forward contract comprises:
a total quantity of one or more items that a buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

9. The method of Claim 8, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

10. The method of Claim 8, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

32 11. ~~The method of Claim 1, further comprising:~~
receiving an alternate contract term from the seller computer;
accepting the alternate contract term without user input if the alternate contract term falls within a range of acceptable contract terms; and
identifying the alternate contract term as requiring user input if the alternate contract term falls outside the range of acceptable contract terms.

12. The method of Claim 1, further comprising:
updating the forecasted demand for the item; and
exercising an option in the flexible trade contract based on the updated forecasted demand.

Cont 13. The method of Claim 1, further comprising calculating a penalty if a seller fails to comply with a term of the flexible trade contract.

A1 14. The method of Claim 1, wherein communicating each proposed flexible trade contract to the seller computer comprises communicating each proposed flexible trade contract to the seller computer through an intermediary.

9/22 > 15. ~~A method of multi-enterprise optimization at a seller computer, comprising:
receiving one or more proposed flexible trade contracts from a buyer computer, each
proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item;
accepting the proposed flexible trade contract to create a flexible trade contract; and
executing the flexible trade contract.~~

16. The method of Claim 15, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

17. The method of Claim 16, wherein each forward contract comprises a quantity of the item that the buyer is obligated to purchase and a seller is obligated to supply.

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A 1 18. The method of Claim 17, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

19. The method of Claim 16, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:
a maximum quantity of the item that a seller is obligated to supply;
a maximum number of item types that the seller is obligated to supply; and
a maximum number of locations where the item must be provided.

20. The method of Claim 19, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:
a maximum of one unit of the item;
a maximum of one item type; and
a maximum of one location.

21. The method of Claim 19, wherein each option contract comprises an exercise period after the execution of the option contract during which the buyer must exercise the option.

22. The method of Claim 16, wherein each flexible forward contract comprises:
a total quantity of one or more items that the buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

23. The method of Claim 22, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

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- a range of zero to one unit for the item;
 - a range of zero to one unit for the item type; and
 - a range of zero to one unit for the location.

24. The method of Claim 22, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

25. ~~The method of Claim 15, further comprising:~~
~~generating an alternate contract term; and~~
~~communicating the alternate contract term to the buyer computer.~~

- 33] 26. The method of Claim 15, further comprising:
receiving a request from the buyer computer to exercise an option in the flexible trade contract; and
accepting the buyer's request if the buyer computer submitted the request within an exercise period and the request does not exceed a term of the flexible forward contract.
27. The method of Claim 15, further comprising calculating a penalty if the buyer fails to comply with a term of the flexible trade contract.
28. The method of Claim 15, wherein receiving one or more proposed flexible trade contracts from the buyer computer comprises receiving one or more proposed flexible trade contracts from the buyer computer through an intermediary.

29. A procurement manager for multi-enterprise optimization, comprising:
a negotiation module operable to receive a forecasted demand for at least one item, generate one or more proposed flexible trade contracts using the forecasted demand for the item, and communicate the proposed flexible trade contract to a seller computer; and
an execution module operable to execute a flexible trade contract created after acceptance of the proposed flexible trade contract at the seller computer.

30. The procurement manager of Claim 29, wherein the negotiation module receives the forecasted demand from a user.

31. The procurement manager of Claim 29, further comprising a forecast module operable to determine the forecasted demand.

32. The procurement manager of Claim 29, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

33. The procurement manager of Claim 32, wherein each forward contract comprises a quantity of the item that a buyer is obligated to purchase and a seller is obligated to supply.

34. The procurement manager of Claim 33, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

35. The procurement manager of Claim 32, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:
a maximum quantity of the item that a seller is obligated to supply;
a maximum number of item types that the seller is obligated to supply; and
a maximum number of locations where the item must be provided.

36. The procurement manager of Claim 35, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:

- a maximum of one unit of the item;
- a maximum of one item type; and
- a maximum of one location.

37. The procurement manager of Claim 35, wherein each option contract comprises an exercise period after the execution of the option contract during which a buyer must exercise the option.

38. The procurement manager of Claim 32, wherein each flexible forward contract comprises:

a total quantity of one or more items that a buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

- a range of quantities for one item;
- a range of quantities for one item type; and
- a range of quantities for one location where the item must be provided.

39. The procurement manager of Claim 38, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

- a range of zero to one unit for the item;
- a range of zero to one unit for the item type; and
- a range of zero to one unit for the location.

40. The procurement manager of Claim 38, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

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41. The procurement manager of Claim 29, wherein the negotiation module is further operable to:
- receive an alternate contract term from the seller computer;
 - accept the alternate contract term without user input if the alternate contract term falls within a range of acceptable contract terms; and
 - identify the alternate contract term as requiring user input if the alternate contract term falls outside the range of acceptable contract terms.
42. The procurement manager of Claim 29, further comprising an exercise module operable to:
- receive an updated forecasted demand for the item; and
 - exercise an option in the flexible trade contract based on the updated forecasted demand.
43. The procurement manager of Claim 29, further comprising a tracking module operable to calculate a penalty if a seller fails to comply with a term of the flexible trade contract.
44. The procurement manager of Claim 29, wherein the negotiation module is operable to communicate the proposed flexible trade contract to the seller computer through an intermediary.

sb 84 > 45. A supply manager for multi-enterprise optimization, comprising:
a negotiation module operable to receive one or more proposed flexible trade contracts from a buyer computer, each proposed flexible trade contract reflecting a buyer's forecasted demand for at least one item, the negotiation module also operable to accept the proposed flexible trade contract to create a flexible trade contract; and
an execution module operable to execute the flexible trade contract.

46. The supply manager of Claim 45, wherein each proposed flexible trade contract is selected from the group consisting of a forward contract, an option contract, and a flexible forward contract.

47. The supply manager of Claim 46, wherein each forward contract comprises a quantity of the item that the buyer is obligated to purchase and a seller is obligated to supply.

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48. The supply manager of Claim 47, wherein each forward contract comprises a unit forward contract, and wherein the buyer is obligated to purchase and the seller is obligated to supply a quantity of one unit of the item.

49. The supply manager of Claim 46, wherein each option contract comprises an option, the option comprising at least one parameter selected from the group consisting of:
a maximum quantity of the item that a seller is obligated to supply;
a maximum number of item types that the seller is obligated to supply; and
a maximum number of locations where the item must be provided.

50. The supply manager of Claim 49, wherein each option contract comprises a unit option contract, and wherein the parameter is selected from the group consisting of:
a maximum of one unit of the item;
a maximum of one item type; and
a maximum of one location.

51. The supply manager of Claim 49, wherein each option contract comprises an exercise period after the execution of the option contract during which the buyer must exercise the option.

52. The supply manager of Claim 46, wherein each flexible forward contract comprises:

a total quantity of one or more items that the buyer is obligated to purchase and a seller is obligated to supply; and

a plurality of subcontracts each comprising an option, each option comprising at least one parameter selected from the group consisting of:

a range of quantities for one item;

a range of quantities for one item type; and

a range of quantities for one location where the item must be provided.

53. The supply manager of Claim 52, wherein each flexible forward contract comprises a unit flexible forward contract, and wherein the total quantity is one unit and the parameter is selected from the group consisting of:

a range of zero to one unit for the item;

a range of zero to one unit for the item type; and

a range of zero to one unit for the location.

54. The supply manager of Claim 52, wherein each flexible forward contract comprises an exercise period after the execution of the flexible forward contract during which the buyer must exercise the option.

55. The supply manager of Claim 45, wherein the negotiation module is further operable to:

generate an alternate contract term; and

communicate the alternate contract term to the buyer computer.

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56. The supply manager of Claim 45, further comprising a tracking module operable

to:

receive a request from the buyer computer to exercise an option in the flexible trade contract; and

accept the buyer's request if the buyer computer submitted the request within an exercise period and the request does not exceed a term of the flexible trade contract.

57. The supply manager of Claim 56, wherein the tracking module is further operable to calculate a penalty if the buyer fails to comply with a term of the flexible trade contract.

58. The supply manager of Claim 45, wherein the negotiation module is operable to receive one or more proposed flexible trade contracts from the buyer computer through an intermediary.